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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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	August 28, 2003, 18:21:02 ; Search time 43.2727 Seconds (without alignments) 51.353 Million cell updates/sec
OM protein - protein search, using sw model	August 28, 2003, 18:21:02 ;
OM protein -	Run on:

Title: US-09-743-225-9
Perfect score: 73
Sequence: 1 KDKATFGTHDGGXA 14
Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1107863 segs, 158726573 residues

Total number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 0 Maximum DB seq length: 2000000000 Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : A_Geneseq_19Jun03:*

. A.Geneseq__J9JunUJ:*
A.Geneseq_J9JunUJ:*
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127. /SIDSJ/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*
128. /SIDSJ/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*
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129. /SIDSJ/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
129. /SIDSJ/gcgdata/geneseq/genese

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Monopeptide which	Cyclic peptide whi	Beta-2GPI Ab bindi	Exemplary pharmaco	Human beta-2 glyco				
A	AAY69260	AAY69270	AAB17993	ABB73364 ·	AAR75003	AAR75002	AAR74999	AAR75001	AAR74998
DB	21	7	21	23	16	16	16	16	16
å Query e Match Length DB I	14	11	12	13	145	207	. 248	266	326
& Query Match	97.3	84.9	76.7	76.7	76.7	76.7	76.7	76.7	76.7
Score	71	62	56	26	26	26	26	26	56
Result No.	1	101	m	4	S	9	7	c o	6

Human beta-2 glyco Human Apolipoprote Beta-2GPI Ab bindi Exemplary pharmaco Humicola insolens	Maize endosperm st Maize starch synth Human ORFX protein	Clostridium diffic Amino acid sequenc Clostridium diffic Clostridium diffic Clostridium diffic	Clostridium diffic Human SNP related Human immune/haema Human Armapoptin.		Arabidopsis acyl-C Novel human diagno C. versicolor stre C. versicolor stre C. albicans BFR2 p	dida albi ergillus ergillus pionibact an G prot ant halos eptococcu
				`\.`.		
AAY44429 ABR48505 AAB17992 ABB73363 AAY82220	AAY06199 AAB49305 ABP09333	ABG80348 AAG79241 ABG80349 ABG80352 ABG80353		AAU28175 AAG67135 AAG67208 AAM93332	AAY88050 AAY88050 AAY88050 AAY88051 AAU82978	ABP73319 ABJ25779 ABJ26379 AAU46546 AAU69559 ABG28037 ABP28881
223242	3778	33353	2223	777777	32222	22222222
326 345 10 785	1674 1674 95	718 719 719 719	719 102 258	44444 80000 80000 80000	1039 1039 283 283 480	531 794 1184 188 537 3636
1010 0 0 0 0					7 M M M M M	52.1 52.1 50.7 50.7 50.7
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011111	16 17 18	18 8 2 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4896	30008	1 E E E E E E E E E E E E E E E E E E E	W W 4 4 4 4 4 4 8 00 00 11 11 11 11 11 11 11 11 11 11 11

ALIGNMENTS

RESULT 1 AXY69260 ID AAX69260 standard; peptide; 14 AA. XX

AAY69260;

30-MAY-2000 (first entry)

Monopeptide which inhibits anti-beta-2-glycoprotein 1 antibodies. Anti-beta-2-glycoprotein 1 antibody; anti-B2GPI antibody; anti-phospholipid syndrome; anti-phospholipid antibody; pregnancy complication; thrombosis; coagulation dysregulation.

Synthetic.

Key Location/Qualifiers
Modified-site 13
/note= "FmocLys(Fmoc)-OH"

WO200001729-A2.

13-JAN-2000.

06-JUL-1999; 99WO-IL00366.

07-JUL-1998; 98IL-0125262.

(YEDA) YEDA RES & DEV CO LTD.

Blank M, Cabilly S, Shoenfeld Y, Katchalski-Katzir E;

complications, thrombosis or coagulation dysregulation.

11 AA;

Seguence

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The present sequence represents a synthetic peptide which is capable of inhibiting the biological activity of anti-beta-2-glycoprotein 1 (B2GPI) monoclonal antibodies in vitro and of inhibiting in vitro induction of experimental anti-phospholipid syndrome in mice by anti-B2GPI monoclonal antibodies. The peptides are used for diagnosis and treatment of anti-phospholipid syndrome. They may also be used for the diagnosis of anti-phospholipid antibodies with different pathogenic biofunctions which may correlate with different complications, thrombosis or coagulation dysregulation.
                                          Novel synthetic peptides that inhibit anti-beta-2-glycoprotein 1 antibodies, useful for diagnosis and treatment of anti-phospholipid syndrome in humans
                                                                                                                                   Disclosure, Page 13; 58pp; English.
WPI; 2000-182105/16
                                                                                                                                                                                                                                                                                                                                                                                                                14 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
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Length 14; 0; Indels 97.3%; Score 71; DB 21; I 100.0%; Pred. No. 2.3e-06; tive 0; Mismatches 0; 1 KDKATFGTHDGGXA 14 1 KDKATFGTHDGGXA 14 Local Similarity 100. Query Match Matches 셤 ð

Gaps

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AAX6927

AAY69270 standard; peptide; 11 AA. (first entry) 30-MAY-2000 AAY69270;

Cyclic peptide which inhibits anti-beta-2-glycoprotein 1 antibodies. Anti-beta-2-glycoprotein 1 antibody; anti-B2GPI antibody; cyclic; anti-phospholipid syndrome; anti-phospholipid antibody; pregnancy complication; thrombosis; coagulation dysregulation.

Synthetic.

WO200001729-A2

13-JAN-2000

99WO-IL00366. 06-JUL-1999; 98IL-0125262. 07-JUL-1998;

(YEDA) YEDA RES & DEV CO LID

Katchalski-Katzir E; Blank M, Cabilly S, Shoenfeld Y,

WPI; 2000-182105/16.

Novel synthetic peptides that inhibit anti-beta-2-glycoprotein 1 antibodies, useful for diagnosis and treatment of anti-phospholipid syndrome in humans

Claim 4; Page 38; 58pp; English.

of inhibiting the biological activity of anti-beta-2-glycoprotein 1 (B2GPI) monoclonal antibodies in vitro and of inhibiting in vivo induction of experimental anti-phospholipid syndrome in mice by anti-B2GPI monoclonal antibodies. The peptides are used for diagnosis and treatment of anti-phospholipid syndrome. They may also be used for the diagnosis of anti-phospholipid antibodies with different pathogenic biofunctions which may correlate with either pregnancy The present sequence represents a synthetic peptide which is capable

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The present invention describes composition of matter (1) comprising an Fr domain, pharmacologically active peptides, and linkers. Where (1) is: Fr domain, pharmacologically active peptides, and linkers. Where (1) is: (X1)a-FI-(X2)b, where: FI = an Fr domain; XI and X2 = are each independently selected from -(L1)c-FI-(L1)d-P2.

(L1)c-FI-(L2)d-P2-(L3)e-F-3, or -(L1)c-FI-(L3)d-P2-(L3)e-P3-(L4)f-P4 where P1, P2, P3, and P4 = are each independently sequences of pharmacologically active peptides; L1, L2, L3, and L4 = are each independently linkers; and a, b, c, d, e, and f = are each independently linkers; and a, b, c, d, e, and f = are each independently or 1, provided that at least 1 of a and b 1s1. The composition can have cytostatic, antiasthmatic, thrombolytic and immunosuppressive activities. DNAs, vectors and host cells from the present invention can be used for producing pharmaceutical compositions. The compositions are useful for treating cancer, asthma, thrombosis, or autoimmune diseases. The use of an Fr domain (rather than a Fab domain) can provide a longer half-life or incorporate functions such as For receptor binding, protein a binding, complement fixation, and possibly placental transfer. AAA69443 to AAA69526 and AAB16955 to AAB18003 represent nucleotide and amino acid sequences used in the exemplification of the present invention.
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    Modified peptide; therapeutic agent; fusion; Fc domain; cancer; autoimmune disease; cytostatic; antiasthmatic; thrombolytic; VEGF; famunosuppressive; EPO; PPO; CTLA4; mimetic; IL-1; TNF; antagonist; MMP; inhibitor; erythropojetin; thrombopojetin; interleukin 1; cytotoxic T cell lymphocyte antigen 4; tumour necrosis factor; vascular endothelial growth factor; matrix metalloproteinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel composition of matter comprising an FC domain and pharmacologically active peptides, useful for treating cancer and autoimmune diseases
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                       Length 11;
                                                                                                                                                                                                                                                                                                                                                                  Beta-2GPI Ab binding peptide sequence SEQ ID NO:1105.
                     DB 21; Le
7.8e-05;
hes 0;
                       Score 62; DB;
; Pred. No. 7.86
0; Mismatches
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                                                                                                                                                                                                                                            AAB17993 standard; Peptide; 12 AA.
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                       84.9%;
100.0%;
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99US-0428082.
Query Match
Best Local Similarity 100.00
The constructive 11; Conservative
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                                                                                                                                                                                                                                                                                                                          31-OCT-2000 (first entry)
                                                                                                     1 KDKATFGTHDG 11
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22-OCT-1999;
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12 AA;
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Disulfide-bond
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Disulfide-bond
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-MAY-1995.
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                                                                                                                                                                                                                                                                                       AAR75003;
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                                                                                                                                                                                                                                                                                    Modified peptide; mimetic; Ec domain; fusion; immunoglobulin G; IgG; EPO; erythropoletin; TPO; tumour necrosis factor alpha inhibitor; TNF-alpha inhibitor; interleukin i antagonist; IL-1 antagonist; TMP; TPO mimetic peptide; EMP; VEGF antagonist; TMP; TPO mimetic peptide; EMP; VEGF antagonist; TMP; IMP inhibitor; antiinflammatory; antitumour; Immunosuppressive; cytostatic; antiinflammatory; antitumour; Immunosuppressive; cytostatic; antinheumatic; antiantentiit; antidiabetic; ophthalmological; antianamic; anorectic; antiinfertility; haemostatic; dermatological; neuroprotective; inflammatory disease; autoimmune disease; tumour growth; cancer; rheumatoid arthritis; disbetic retinopathy; infertility; obesity; sleep disorder; neurological degenerative disease; anaemia;
                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel vahicle-peptide molecule or its multimers useful for treating inflammatory and autoimmune diseases, cancer, rheumatold arthritis, diabetic retinopathy, obesity, sleep disorders and infertility -
                                                                                                                                                                                                                                                                                                                                                                                                                             thrombocytopaenia; metastatic tumour; systemic lupus erythematosus; Fanconi's syndrome.
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            DB 21; Leus-
0.0011;
1; Indels
                                                                                                                                                                                                                                                              Exemplary pharmacologically active peptide SEQ ID NO:1103.
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                        Score 56; DB 2
Pred. No. 0.001
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Felge U, Liu C, Cheetham JC, Boone TC,
                                                                                                                                                                            ABB73364 standard; Peptide; 12 AA.
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                         76.7%;
90.9%;
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                                                                                                                                                                                                                                 (first entry)
            Query Match
Best Local Similarity 90.>
Best Local 10, Conservative
                                                                              1 KDKATFGTHDG 11
                                                                                             1 KDKATFGCHDG 11
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12
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 Sequence
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ID ABB
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deficiency, such as thrombocytopaenia, aplastic anaemia, metastatic tumour which result in thrombocytopaenia, systemic lupus erythematosus, and Fancoul's syndrome. ABB72403 to ABB73426 and ABL35695 to ABL35777 represent amino acid and nucleic acid sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human beta-2 glycoprotein; domains IV-V; antiphospholipid antibodies; reagent; assay; dlagnosis; autoimmune; infectious diseases.
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    using peptide

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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Pred. No. 0.0011;
0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Assay and typing of anti:phospholipid antibodies containing the IV domain of beta-2 glyco:protein
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Pred. No. 0.02;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR75003 standard; protein; 145 AA.
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90.98;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-JAN-1996 (first entry)
                                                                                                                                                                     Query Match
Best Local Similarity 90.9:
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Best Local Similarity 90.9
Matches 10; Conservative
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KDKATFGCHDG 11
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8

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Human beta-2 glycoprotein; domains I-IV; antiphospholipid antibodies;
reagent; assay; dlagnosis; autoimmune; infectious diseases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - using peptide
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Pred. No. 0.038;
); Mismatches 1; Indels
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                                                                                                                  Location/Qualifiers
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reagent; assay; diagnosis;
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Best Local Similarity 90.9
....nes 10; Conservative
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208 KDKATFGCHDG 218
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63..109
95..121
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                                                                                                                                                                                                                                                                                                                                          26-MAY-1995.
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reagent; assay; diagnosis; autoimmune; infectious diseases.
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Pred. No. 0.031;
0; Mismatches 1; Indels
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                                                                                        AAR75002 standard; protein; 207 AA.
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KDKATFGCHDG
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Human beta-2 glycoprotein I; beta-2 GPI; toleragen; B cell anergy; beta-2 GPI-dependent antiphospholipid antibody; thrombosis; recurrent foetal loss; thrombocytopenia; autoimmune disease; systemic lupus erythematosus; coagulation assay.
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/label= Domain_1
/note= "binds to antiphospholipid antibody"
                                                                                                                                                                                                                                                                                                                                                                                               Score 56; DB 16; Length 326;
Pred. No. 0.052;
                                                                                                                                                                                Assay and typing of anti:phospholipid antibodies containing the IV domain of beta-2 glyco:protein
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                                                                                                                      Koike T,
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98US-0103088.
99US-0328199.
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90.9%;
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                            94WO-JP01929.
                                                          93JP-0309874
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N-PSDB; AAZ29687.
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                                                                                        (YAMA-) YAMASA CORP
                                                                                                                                                                                                                                                                                                                                                                    326 AA;
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05-OCT-1998;
08-JUN-1999;
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                              15-NOV-1994;
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                                                                                                                      Igarashi M,
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Domain
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                                                                                                                                                                                                                                                                                                          Assay and typing of anti:phospholipid antibodies – using peptide containing the IV domain of beta-2 glyco:protein
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Best Local Similarity 90.9
Matches 10; Conservative
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                                                                                                  present sequence is human beta-2 glycoprotein, a phospholipid binding
                                                                                                                serum protein. GPI proteins bind to and inhibits beta-2 GPI-dependent antiphospholipid antibodies. They are useful as toleragens when they bind to the antibodies at the surface of a B cell and triggers B cell aneary. The polypeptides and mimetics can be used for treating disorders associated with beta_2GPI-dependent aPL-associated pathologies, e.g. thrombosis, recurrent foetal loss, thrombocytopenia or autoimmune diseases such as systemic lupus erythematosus. The polypeptides can also be used to detect and purify antibodies. They can also be used in
                                                                                                                                                                                                                                                                                                                                                           Gaps
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              New isolated domain 1 beta-2 GPI polypeptides, used for inhibiting antiphospholipid antibodies for treating, e.g. thrombosis -
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                                                                                                                                                                                                                                                                                                                      Score 56; DB 21; Length 326;
Pred. No. 0.052;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; GENSET; therapeutic; therapy.
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                                                                 Claim 1; Fig 1; 158pp; English.
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15-JUN-2001; 2001US-298698P.
29-JUN-2001; 2001US-302277P.
13-JUL-2001; 2001US-305456P.
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Matches 10; Conservative
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N-PSDB; ACC51112.
                                                                                                                                                                                                                                                        coagulation assays.
                                                                                                                                                                                                                                                                                      326 AA;
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The present invention describes composition of matter (I) comprising an FC domain, pharmacologically active peptides, and linkers. Where (I) is: (XI)3-FI-(XI)5, where: FI = an FC domain; XI and X2 = are each independently selected from -(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(Li)-FI-(
                                                                                                                                                                             ö
                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified peptide; therapeutic agent; fusion; Fc domain; cancer; autoimmune disease; cytostatic; antiasthmatic; thrombolytic; VEGF; immentic; ii. if NF; antiagonist; MMP; inhibitor; erythropoietin; thrombopoietin; interleukin; cytotoxic T cell lymphocyte antigen 4; tumour necrosis factor; vascular endothelial growth factor; matrix metalloproteinase;
identify chromosomes, and as reagents in assays to quantitatively determined levels of GENSET expression in biological samples.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel composition of matter comprising an Fc domain and pharmacologically active peptides, useful for treating cancer and
                                                                                                                                                                             ö
                                                                                                                                Length 345;
                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Beta-2GPI Ab binding peptide sequence SEQ ID NO:1104.
                                                                                                                           Score 56; DB 24,
Pred. No. 0.056;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Boone TC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  asthma; thrombosis; pharmaceutical.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 39; Page 600; 608pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                         AAB17992 standard; Peptide; 10 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cheetham J,
                                                                                                                           Ouery Match
Best Local Similarity 90.9%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US25044.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-OCT-2000 (first entry)
                                                                                                                                                                                                                                                                              227 KDKATFGCHDG 237
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                                                                                                                                                                                                                               1 KDKATFGTHDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-350702/30.
                                                                            345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (AMGE-) AMGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200024782-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB17992;
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                                                                                                                                                                                                                                                                                                                                                          RESULT 12
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  ន្តដ្ឋនូ
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The present invention describes a vehicle-peptide molecule (I) or its multimers. (I) can have antinflammatory, antitumour, immunosuppressive, cytostatic, antirhematic, antiatathritic, antidiabetic, ophichalmological, antianaemic, anorectic, antianfertility, heemostatic, dermatological and rianaemic, anorectic, antinfertility, heemostatic, dermatological and neuroprotective activities. (I) can be used as a therapeutic or prophylactic agent as well as for screening purposes. (I) is useful for diagnosing diseases characterised by dysfunction of their associated protein of interest, for identifying normal or abnormal proteins of interest, as a part of diagnostic kit to detect the presence of their interest, as a part of diagnostic kit to detect the presence of their contemnatoid arthritis, diabetic retinopathy, obesity, sleep disorders, infertility, and neurological degenerative diseases, tumour growth, cancer, cheumatoid arthritis, diabetic retinopathy, obesity, sleep disorders, infertility, and neurological degenerative diseases. (I), comprising tow red blood cell levels such as anaemia. The TPO-minetic comprising compounds are useful for treating conditions that involve an existing
                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Modified peptide; mimetic; Fc domain; fusion; immunoglobulin G; IgG; EPO; erythropoletin; TPO; tumour necrosis factor alpha inhibitor; TNF-alpha inhibitor; interleukin 1 antagonist; IL-1 antagonist; TMP; TPO mimetic peptide; EMP; VEGF antagonist; TMP; MMP inhibitor; antiinflammatory; antitumour; Immunosuppressive; cytostatic; antiinflammatory; antitumour; immunosuppressive; cytostatic; antiinferthilit; antidiabetic; ophthalmological; antianamenic; anorecito; antiinferthility; haemostatic; dermatological; neuroprotective; inflammatory disease; autoimmune disease; tumour growth; cancer; rheumatoid arthritis; diabetic retinopathy; infertility; obesity; sleep disorder; neurological degenerative disease; anaemia;
                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel vehicle-peptide molecule or its multimers useful for treating inflammatory and autoimmune diseases, cancer, rheumatoid arthritis, diabetic retinopathy, obesity, sleep disorders and infertility -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thrombocytopaenia; metastatic tumour; systemic lupus erythematosus;
                                                                                                      ö
                                                          Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                   Exemplary pharmacologically active peptide SEQ ID NO:1102.
                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gudas JM;
                                                          DB 21;
                                                          Score 50; DB 2
Pred. No. 0.011
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boone TC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 39; Page 62; 176pp; English.
                                                                                                                                                                                                                                                                                          ABB73363 standard; Peptide; 10 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cheetham JC,
                                                          68.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-MAY-2001; 2001WO-US14310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-MAY-2000; 2000US-0563286
                                  Query Match
Best Local Similarity 90.us,
Best Local Similarity - 90.us
                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                             1 KDKATFGTHD 10
                                                                                                                                                                    1 KDKATFGCHD 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-130313/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fancon1's syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Liu C,
                   10 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200183525-A2
                                                                                                                                                                                                                                                                                                                                                                          05-APR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Feige U,
                   Sequence
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megakaryocyte/platelet deficiency or an expected megakaryocyte/platelet deficiency, such as thrombocytopaenia, aplastic anaemia, metastatic tumour which result in thrombocytopaenia, systemic lupus erythematosus, and Fanconi's syndrome. ABP7403 to ABB73426 and ABB735695 to ABB73777 represent amino acid and nucleic acid sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New cellobiose dehydrogenase polynucleotides and polypeptides used for modulation of cellobiose dehydrogenase activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                       Humicola insolens; cellobiose dehydrogenase; pulp bleaching process
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
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Pred. No. 24;
0; Mismatches 3; Indels
                                                                                                                                         DB 23; Length 10;
                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                            Humicola insolens cellobiose dehydrogenase SEQ ID NO: 2.
                                                                                                                                         Score 50; DB 23,
Pred. No. 0.011;
); Mismatches
                                                                                                                                                                                                                                                                                                              AAY82220 standard; Protein; 785 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Fig 3; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (NOVO.) NOVO NORDISK BIOTECH
                                                                                                                                       68.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0265108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0265108
                                                                                                                                                                                                                                                                                                                                                                             (first entry)
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                                                                                                                                                                         9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | |||| || |
DTATEGEHDNG 198
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                                                                                                                                                                                                     1 KDKATFGTHD 10
                                                                                                                                                                                                                       1 KDKATFGCHD 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brown K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-255698/22.
N-PSDB; AAZ95701.
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nes 8; Conserv
                                                                                                                                      Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Humicola insolens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             785 AA;
                                                                                                            10 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Golightly E,
                                                                                                                                                                                                                                                                                                                                                                           12-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-MAR-1999;
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                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                              AAY82220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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Matches
                                                                                                                                                                                                                                                                                  RESULT 14
                                                                                                                                                                                                                                                                                                 AAY 82220
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RESULT 15

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The invention relates to nucleic acids encoding polypeptides having cellobiose dehydrogenase activity. Nucleic acid construct the comprising the polynucleotides are useful in transgenic plant production. The encoded protein is useful in plup bleaching process under alkaline conditions. Plants grown where cellobiose activity has been removed may be used to express heterologous proteins of pharmaceutical interest such as hormones, growth factors and receptors. The present sequence represents a H. insolens DSM 1800 cellobiose dehydrogenase polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel nucleic acid encoding polypeptides with cellobiose dehydrogenase activity useful for transgenic plant production -
                                                                                                                                                                                                                                                   Cellobiose dehydrogenase; transgenic; pulp bleaching; cellobiose;
pharmaceutical
                                                                                                                                                                                             H. insolens DSM 1800 cellobiose dehydrogenase polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                    1..21 /note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note- "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                     AAG65578 standard; Protein; 785 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 2; Fig 3A-C; 27pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (NOVO ) NOVOZYMES BIOTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JAN-2000; 2000US-0479264.
                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Solightly EJ, Brown KM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-601400/68.
N-PSDB; AAH47743.
                                                                                                                                                                                                                                                                                                                                             Humicola insolens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             785 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-MAR-1999;
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                                                                                 AAG65578;
                                                                                                                                                                                                                                                                                                                                                                                                      Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein
AAG6557
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Gaps ö Score 44; DB 22; Length 785; Pred. No. 24; 0; Mismatches 3; Indels Query Match 60.38; Best Local Similarity 72.78; Matches 8; Conservative ò

ö

2 DKATFGTHDGG 12

| |||| || || 188 DTATFGFHDNG 198

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Search completed: August 28, 2003, 18:34:29 Job time : 44.2727 secs